Definitions – Module 9

Module – 0: Blank

Topics

- Module Introduction
- Conclusion

You should be able to:

Recapitulation of Modules –

Topic

Review Previous Content

Content

You should be able to:

Questions

Definition: Application Rationalization

Term

Application Rationalization

Used in Module(s):

Questions

Definition

- The reorganizing of an application portfolio to streamline the portfolio, by replacing, retiring, modernizing or consolidating applications, in accordance with a desired business outcome.

Definition: Authorizing Official (AO)

Term

Authorizing Official (AO)

Used in Module(s):

Questions

Definition

- The individual or entity responsible for accepting the risks associated within a given area of responsibility.

Definition: Big Data

Term

Big Data

Used in Module(s):

Questions

Definition

- An umbrella term referring both to the methods surrounding the use of very large data collections, and the characterization of efforts having a high degree of data volume, velocity, and variety.

Definition: Capital Expenditure (CAPEX)

Term

Capital Expenditure (CAPEX)

Used in Module(s):

Questions

Definition

- The cost to buy fixed assets or to add to the value of an existing fixed asset with a useful life extending beyond the current year.

Definition: Cloud Access Point (CAP)

Term

Cloud Access Point (CAP)

Used in Module(s):

Questions

Definition

- A DoD system of network boundary protections and monitoring devices through which cloud services outside the DoD security boundary must traverse to connect to resources inside the DoD security boundary.

Definition: Cloud Computing

Term

Cloud Computing

Used in Module(s):

Questions

Definition

- A model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.

Definition: Cloud First

Term

Cloud First

Used in Module(s):

Questions

Definition

- The policy announced in December 2010 by the U.S. CIO to accelerate adoption of cloud computing across the Federal government by directing agencies “to evaluate safe, secure cloud computing options before making new investments” in information technology.

Definition: Cloud Security Requirements Guide (SRG)

Term

Cloud Security Requirements Guide (SRG)

Used in Module(s):

Questions

Definition

- The DoD document that provides the security requirements and guidance for cloud services; establishes the basis for granting DoD provisional authorizations; and provides guidance to DoD mission owners regarding the use of cloud services.

Definition: Cloud Service Provider (CSP)

Term

Cloud Service Provider (CSP)

Used in Module(s):

Questions

Definition

- A person or organization offering a cloud capability exposed as a service.
- A Cloud Service Provider (CSP) is an entity that offers one or more cloud services in one or more deployment models. [cc-srg]
- A CSP might leverage or outsource services of other organizations and other CSPs (e.g., placing certain servers or equipment in third party facilities such as data centers, carrier hotels / collocation facilities, and Internet Exchange Points (IXPs)). [cc-srg]
- CSPs offering SaaS may leverage one or more third party CSP's (i.e., for IaaS or PaaS) to build out a capability or offering. [cc-srg]

Definition: Cloud Service Offering (CSO)

Term

Cloud Service Offering (CSO)

Used in Module(s):

Questions

Definition

- The cloud solution available from a CSP.
- A Cloud Service Offering (CSO) is the actual IaaS/PaaS/SaaS solution available from a CSP. This distinction is important since a CSP may provide several different CSOs. [cc-srg]

Definition: Computer Network Defense (CND)

Term

Computer Network Defense (CND)

Used in Module(s):

Questions

Definition

- The defense and protection of networks and information systems, detection of threats, and response to incidents.

Definition: CND Service Provider (CNDSP)

Term

CND Service Provider (CNDSP)

Used in Module(s):

Questions

Definition

- An organization accredited to monitor and protect the information systems and assets within a defined boundary.

Definition: Commercial CSP

Term

Commercial CSP

Used in Module(s):

Questions

Definition

- A non-DoD non-Government organization offering cloud services to the public and/or government customers as a business, typically for a fee with the intent to make a profit.

Definition: Commodity Hardware

Term

Commodity Hardware

Used in Module(s):

Questions

Definition

- A device or device component that is relatively inexpensive, widely available, and interchangeable with other hardware of its type.

Definition: Controlled Unclassified Information (CUI)

Term

Controlled Unclassified Information (CUI)

Used in Module(s):

Questions

Definition

- Established by Executive Order 13556 in November 2010, this is the categorical designation of unclassified information that under law or policy requires protection from unauthorized disclosure.

Definition: Defense Federal Acquisition Regulation Supplement (DFARS)

Term

Defense Federal Acquisition Regulation Supplement (DFARS)

Used in Module(s):

Questions

Definition

- The DoD-specific acquisition regulations that DoD acquisition officials, and those contractors doing business with DoD, must follow in the procurement process for goods and services.

Definition: DEVOPS

Term

DEVOPS

Used in Module(s):

Questions

Definition

- A method of rapid software development that emphasizes communication, collaboration, integration, automation, and cooperation between software developers, engineers, testers, and operators.

Definition: DoD Provisional Authorization (PA)

Term

DoD Provisional Authorization (PA)

Used in Module(s):

Questions

Definition

- A DoD Provisional Authorization (PA) is an acceptance of risk based on an evaluation of the CSP's CSO and the potential for risk introduced to DoD networks.
- The DoD PA process follows the same "do once, use many times" framework as FedRAMP does.
- DoD PAs are granted at all information impact levels which provides a foundation that Authorizing Officials (AOs) responsible for mission applications must leverage in determining the overall risk to the missions/applications that are executed as part of a CSO.

Definition: Elasticity

Term

Elasticity

Used in Module(s):

Questions

Definition

- The ability of cloud capabilities to scale up (addition of resources) and scale down (release of resources) to match demand.

Definition: Federal Acquisition Regulation (FAR)

Term

Federal Acquisition Regulation (FAR)

Used in Module(s):

Questions

Definition

- The principal set of rules governing the acquisition process by which the federal government purchases goods and services.

Definition: Federal Risk and Authorization Management Program FedRAMP

Term

Federal Risk and Authorization Management Program FedRAMP

Used in Module(s):

Questions

Definition

- The Federal Risk and Authorization Management Program, or FedRAMP, is a government-wide program that provides a standardized approach to security assessment, authorization, and continuous monitoring for cloud products and services. Compliance with FedRAMP is mandated for all Federal Agencies by the Office of Management and Budget (OMB) as their systems and applications are migrated to the commercial cloud under the Federal Government's Cloud-First initiatives.
- FedRAMP uses a "do once, use many times" framework that intends to reduce cost, time, and staff required for security assessments and process monitoring reports

Definition: Information Impact Levels

Term

Information Impact Levels

Used in Module(s):

Questions

Definition

- Cloud security information impact levels are defined by the combination of:
  - the sensitivity of information to be stored and processed in the CSP environment;
  - the potential impact of an event that results in the loss of confidentiality, integrity or availability of that information.
- Information Impact Levels consider the potential impact should the confidentiality or the integrity of the information be compromised.
- DoD Mission Owners categorize mission information systems in accordance with policy (DoDI 8510.01 and CNSSI 1253) to identify the impact level that most closely aligns with the defined categorization and information sensitivity.

Definition: Licensing Model

Term

Licensing Model

Used in Module(s):

Questions

Definition

- A business or pricing construct under which a customer is granted permission by a legal instrument to use one or more copies of software within the scope of the legal agreement.

Definition: Lights-Out Data Center

Term

Lights-Out Data Center

Used in Module(s):

Questions

Definition

- A facility that has eliminated all or most of the need for direct access by personnel, and can be operated remotely as well as with automation programs used to perform unattended operations.

Definition: Metering

Term

Metering

Used in Module(s):

Questions

Definition

- A mechanism to measure usage of cloud computing resources.

Definition: Multi-Tenancy

Term

Multi-Tenancy

Used in Module(s):

Questions

Definition

- A design principle allowing a single instance of a computing resource to provide separate environments to serve multiple client organizations.

Definition: Operational Expense (OPEX)

Term

Operational Expense (OPEX)

Used in Module(s):

Questions

Definition

- The ongoing cost for running a product, business, or system.

Definition: IaaS – Infrastructure as a Service

Term

IaaS – Infrastructure as a Service

Used in Module(s):

Questions

Definition

- A cloud service model in which the capability provided to the consumer is to provision processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and applications.

Definition: PaaS – Platform as a Service

Term

PaaS – Platform as a Service

Used in Module(s):

Questions

Definition

- The cloud service model in which the consumer is provided infrastructure resources along with the programming languages and tools to deploy further capabilities.

Personally Identifiable Information (PII)

Term

Personally Identifiable Information (PII)

Used in Module(s):

Module 5

Questions

1. Match PII to the appropriate description

Definition

Personally Identifiable Information (PII) — any information about an individual maintained by an agency, including :

- (1) any information that can be used to distinguish or trace an individual's identity, such as name, social security number, date and place of birth, mother's maiden name, or biometric records
- (2) any other information that is linked or linkable to an individual, such as medical, educational, financial, and employment information.

Definition: SaaS – Software as a Service

Term

SaaS – Software as a Service

Used in Module(s):

Questions

Definition

- The cloud service model in which the capability provided to the consumer uses the provider's applications running on a cloud infrastructure. The consumer does not manage or control the underlying cloud networking, servers, operating systems, storage, or applications (with the possible exception of limited user-specific application configuration settings).

Definition: Physical Separation

Term

Physical Separation

Used in Module(s):

Questions

Definition

- Isolation of resources is provided by hardware controls or tangible means (e.g., an “air gap”). Note: used more with regard to separation of infrastructure within a facility.

Definition: Public Cloud

Term

Public Cloud

Used in Module(s):

Questions

Definition

- A cloud deployment model in which the cloud infrastructure is made available to the general public or large industry group, and is owned by an organization selling cloud services.

Definition: Private Cloud

Term

Private Cloud

Used in Module(s):

Questions

Definition

- A cloud deployment model in which the cloud infrastructure is operated solely for a single organization. The cloud infrastructure may be managed by the consuming organization or a third party, and may exist on or off the premises of the consuming organization.

Definition: Hybrid Cloud

Term

Hybrid Cloud

Used in Module(s):

Questions

Definition

- A cloud deployment model in which the cloud infrastructure is a composition of two or more clouds (private, community, or public) that remain unique entities but are bound together to enable data and application portability.

Definition: Service Level Agreement (SLA)

Term

Service Level Agreement (SLA)

Used in Module(s):

Questions

Definition

- A contract defining the characteristics of services expected by consumers, what characteristics must be met by service providers, and associated enforcement mechanisms.

Definition: Software-Defined Networking (SDN)

Term

Software-Defined Networking (SDN)

Used in Module(s):

Questions

Definition

- An architecture design enabling network control to become directly programmable and the underlying infrastructure to be abstracted from applications and network services.

Definition: Subscription Model

Term

Subscription Model

Used in Module(s):

Questions

Definition

- A business or pricing construct under which a customer must pay for access to a product or service; typically for a specific period of time (e.g., monthly, quarterly, annually).

Definition: Utility-Based Computing

Term

Utility-Based Computing

Used in Module(s):

Questions

Definition

- The packaging of computing resources as metered services similar to a traditional public utility.

Definition: Hypervisor

Term

Hypervisor

Used in Module(s):

Questions

Definition

- A hypervisor is software, firmware or hardware that allows multiple operating systems to share a single hardware host.
- Each operating system appears to have the host's processor, memory, and other resources all to itself.
- A virtualization construct (and technique) that allows multiple operating systems, termed guests, to run concurrently on a host computer.
- A hypervisor is a piece of computer software that is able to instantiate and run virtual representations of a collection of computer hardware (e.g. compute, storage, network).
- Each virtual representation is called a virtual maching.
- to instantiate and runs virtual representations ; allows multiple operating systems to share a single hardware host
- The physical hardware on which a hypervisor is running is called the host machine; each virtual machine is called a guest machine.

Definition: Virtual Machine (VM)

Term

Virtual Machine (VM)

Used in Module(s):

Questions

Definition

- Software emulating a physical machine.

Definition: Virtual Separation

Term

Virtual Separation

Used in Module(s):

Questions

Definition

- Isolation of resources provided by software controls (as opposed to physical means).

Definition: Virtualization

Term

Virtualization

Used in Module(s):

Questions

Definition

- The means of separating the execution of software from the underlying hardware.
- Virtualization is a means to provide a software representation of a physical device such as a server, storage device, or network. as if it were a real single logical resource.
- A physical computing device such as a server, storage device, or network.
- Devices, applications and human users are able to interact with the virtual resource as if it were a real single logical resource.
- or even an operating system where the framework divides the resource into one or more execution environments.